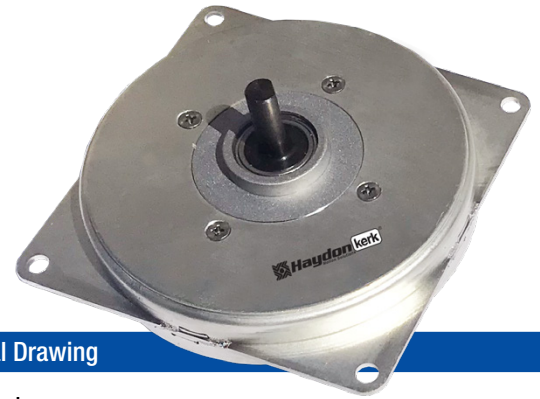


80000 Pancake Series Planetary Gear Train

Designed to meet or exceed your most demanding small space high-torque applications

For a given size motor, the larger the rotor the greater the torque. The 80000 Series is a compact, low profile pancake stepper motor with a specially engineered, rotor-embedded, single-stage planetary gear train. Motor has a maximum diameter of 3.15-in (80mm) and is .75-in (20mm) thick.

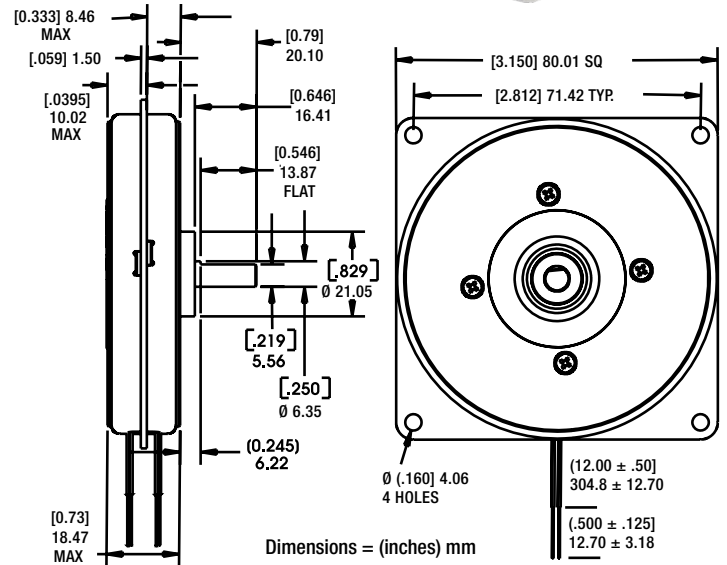


Specifications

Ø 80 mm (3.15-inch) Pancake	
Wiring	Bipolar
Part No.	80GH04-05 80GH04-12
Gear Ratios/Step Angle	4:1 = 0.9375°
Winding Voltage	5 VDC 12 VDC
Current (RMS)/phase	1.4 A .58 A
Resistance/phase*	3.6 Ω 20.6 Ω
Step Angle	3.75°
Insulation Resistance	20 MΩ
Power Consumption	14 W
Weight	12 oz. (343 g)
Insulation Class	Class A
Operating Temp. Rise	32°-122°F (0-50°C)
Travel Direction	Reversible
Bearing	Radial Ball

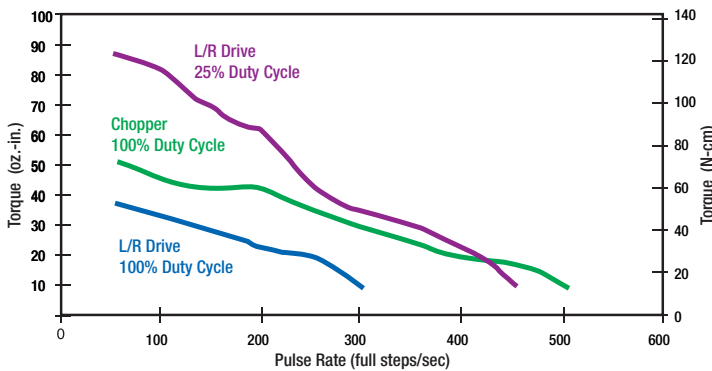
* ± 10% at 25°C (77°F) ambient.

Dimensional Drawing



Performance Curves

TORQUE vs. PULSE RATE**



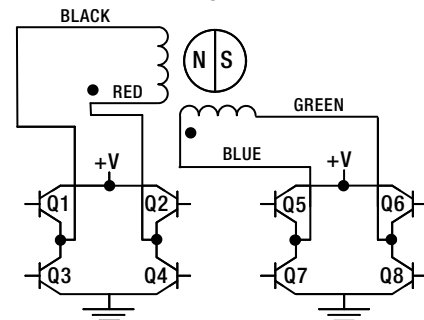
Identifying the Planetary Gear Train Number Codes when Ordering

80	GH	04	12	42
Series Number Designation	Style	Gear Ratio/Step Angle	Voltage	Suffix
80 = Pancake Motor	GH = Gear Train	04 = 4:1 Gear Ratio 3.75° Gear Angle	05 = 5 VDC 12 = 12 VDC	42 = Bipolar Wiring

NOTE: Dashes must be included in Part Number (-) as shown above. For assistance call our Engineering Team at 203 756 7441.

Wiring & Stepping Sequence

BIPOLAR



Bipolar	Q2-Q3	Q1-Q4	Q6-Q7	Q5-Q8
Step				
1	ON	OFF	ON	OFF
2	OFF	ON	ON	OFF
3	OFF	ON	OFF	ON
4	ON	OFF	OFF	ON
1	ON	OFF	ON	OFF

Note: Half stepping is accomplished by inserting an off state between transitioning phases. Shaft rotation as viewed from the output shaft.

**Ramping can increase the performance of a motor either by increasing the top speed or getting a heavier load accelerated up to speed faster. Also, deceleration can be used to stop the motor without overshoot.